

Pinus banksiana / *Abies balsamea* Forest (Jack Pine / Balsam Fir Forest)

COMMON NAME Jack Pine / Balsam Fir Forest
SYNONYM Jack Pine / Balsam Fir Forest
PHYSIOGNOMIC CLASS Forest (I)
PHYSIOGNOMIC SUBCLASS Evergreen forest (I.A)
PHYSIOGNOMIC GROUP Temperate or subpolar needle-leaved evergreen forest (I.A.8)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (I.A.8.N)
FORMATION Rounded-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.b)
ALLIANCE PINUS BANKSIANA FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Voyageurs National Park

This community type occurs throughout the park on well-drained, somewhat rocky upland sites.

Globally

This community is found in northeastern Minnesota and northwestern Ontario.

ENVIRONMENTAL DESCRIPTION

Voyageurs National Park

This community type occurs on flat or slightly sloping terrain with variable aspects. Soils are typically fairly well drained loams or sandy loams ranging from 5-30 cm in depth. Surficial rocks and bedrock outcrops are common. In some stands, coarse woody debris is abundant.

Globally

This community is found on moderately deep (50-100 cm), usually sandy soils (Grigal and Ohmann 1975). Surficial rocks and bedrock outcrops are common. The sites are often on north- to northeast-facing slopes.

MOST ABUNDANT SPECIES

Voyageurs National Park

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus banksiana</i>
Tree sub-canopy	<i>Abies balsamea</i> , <i>Picea mariana</i>
Tall shrub	<i>Abies balsamea</i> , <i>Viburnum rafinesquianum</i> , <i>Corylus cornuta</i>
Short shrub	<i>Vaccinium angustifolium</i>
Forb	<i>Aster macrophyllus</i> , <i>Aralia nudicaulis</i>
Fern	<i>Pteridium aquilinum</i>
Nonvascular	<i>Pleurozium schreberi</i> , <i>Dicranum</i> spp.

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CHARACTERISTIC SPECIES

Voyageurs National Park

Pinus banksiana*, *Abies balsamea*, *Viburnum rafinesquianum

Globally

Pinus banksiana, *Abies balsamea*

VEGETATION DESCRIPTION

Voyageurs National Park

The canopy of this community usually consists solely of *Pinus banksiana* and ranges from 60-80% cover. The sub-canopy is most often absent, but in some cases may be a 20-30% cover of *Abies balsamea*, *Betula papyrifera*, or *Picea mariana*. In some cases, these species may also reach the canopy. Like the sub-canopy, the tall shrub layer may be absent or present at 20-30% cover and consist of *Abies balsamea*, *Viburnum rafinesquianum*, and *Corylus cornuta*. A dwarf-shrub layer dominated by *Vaccinium angustifolium* is usually present at 20-40% cover but in some cases may be as low as 5%. Herbaceous cover is highly variable, ranging from 30-80%, and consists mainly of *Aster macrophyllus*, *Aralia nudicaulis*, and *Pteridium aquilinum*, with lesser amounts of *Cornus canadensis*, *Maianthemum canadensis*, *Lycopodium dendroideum*, and *Oryzopsis asperifolia*. The abundance of the nonvascular strata, which usually consists mainly of *Pleurozium schreberi*, is highly variable. Stands with 90% cover of *Pleurozium schreberi*, as well as stands lacking this moss, are both common.

Globally

The tree layer of this community is dominated by *Pinus banksiana*, often to the exclusion of other species. *Abies balsamea*, *Betula papyrifera*, *Picea mariana*, and *Populus tremuloides* dominate the sapling and seedling layers and sometimes occur in the canopy. There is a well developed shrub layer containing species such as *Acer spicatum*, *Amelanchier alnifolia*, *Corylus cornuta*, *Lonicera canadensis*, and *Vaccinium* spp. The herbaceous layer is dominated by dry-mesic forest species including *Aralia nudicaulis*, *Aster macrophyllus*, *Clintonia borealis*, *Coptis trifolia*, and *Galium boreale*. Mosses and lichens are common on the forest floor.

CONSERVATION RANK G5.

DATABASE CODE Cegl002437

COMMENTS

Voyageurs National Park

Diagnostic features of the type include the canopy consisting solely of *Pinus banksiana* and canopy closure not prevented by the presence of exposed bedrock. This type is more similar to the Jack Pine Rocky Woodland than to the Jack Pine-Northern Pin Oak Forest. Some stands in the park may represent a Jack Pine/Feathermoss type similar to the Black Spruce/Feathermoss type. *Populus* spp. may rarely be found mixed in the canopy with *Pinus banksiana*. These circumstances represent the Jack Pine-Aspen/Bush Honeysuckle Forest type, which is rare in the park. More commonly, the Jack Pine/Balsam Fir Forest is found in a mosaic pattern with Aspen-Birch/Boreal Conifer Forest.

This community often originates after and may be maintained by fire.

Globally

This community often originates following fires.

REFERENCES

- Grigal, D. F. and L. F. Ohmann. 1975. Classification, description, and dynamics of upland plant communities within a Minnesota wilderness area. *Ecological Monographs*. 45:389-407.
- Sims, R. A., W. D. Towill, K. A. Baldwin, and G. M. Wickware. 1989. Field guide to the forest ecosystem classification for northwestern Ontario. Ontario Ministry of Natural Resources.

Note:

This association is found in two different map classes:

- 1) [Jack Pine / Balsam Fir Forest](#)
- 2) [Jack Pine – Aspen Forest Mosaic](#)